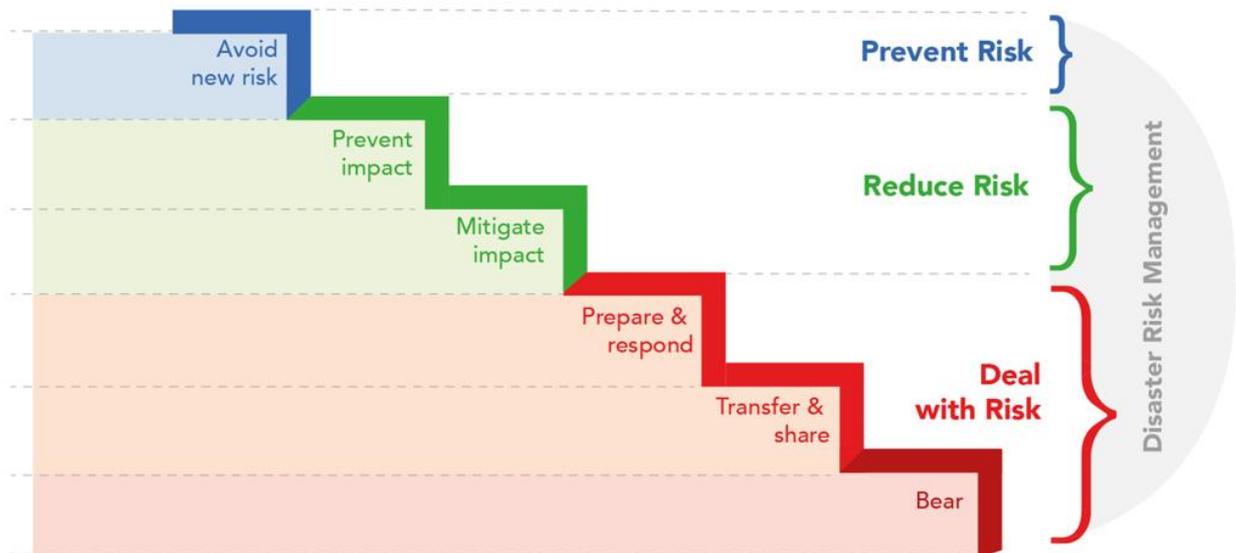

Swiss NGO DRR Platform

DRR and CCA Indicator Toolbox Guidelines



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Abbreviations

CCA	Climate Change Adaptation
DRR	Disaster Risk Reduction
NGO	Non-governmental organisation
SDG	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction

1 Introduction

1.1 Background

In 2014 and 2015, the Swiss NGO DRR Platform developed an indicator toolbox and disseminated it among its member organisations. The toolbox related to the guidance note “Characteristics of a Disaster-resilient Community” by John Twigg. Since then, the Sendai Framework for Disaster Risk Reduction (SFDRR) as well as the Sustainable Development Goals (SDG) were established, including indicator systems. In the context of demands for improved outcome measuring, many Platform member organisations furthermore developed their outcome monitoring systems and are currently in full swing to implement those changes.

Based on that the Platform decided to review and improve the indicator toolbox.

1.2 Scope and aims

The toolbox covers indicators for both Disaster Risk Reduction (DRR) as well as Climate Change Adaptation (CCA). The Platform member organisations share the notion that DRR and CCA can save lives and livelihoods and aim to strengthen the resilience of communities enabling them to anticipate, absorb, and bounce back from shocks, stresses and hazardous events. However, this toolbox does not provide specific measurement approaches for resilience as the framing, operationalization and measuring of resilience differs substantially according to the different sectors.

The toolbox provides DRR/CCA advisors and focal points as well as programme staff of NGOs with a set of outcomes and related indicators for targeted DRR and CCA projects.

1.3 Use of the toolbox

The toolbox is excel-based and contains 12 outcomes and 70 related indicators that are formulated in a generic way. Both, outcomes and indicators need to be adapted to the specific project context.

It is envisaged, that the toolbox is used throughout the project management cycle. It helps to set up a project but also serves as a monitoring tool.

The toolbox can be used online and off-line. The online version initiates with the illustration of the risk staircase that serves as basis for the toolbox (see section 2.1. below). By hovering over the steps, the corresponding outcomes of the step are shown. By clicking either on the step or on a specific outcome, a list of the corresponding indicators including the description are shown. By clicking on a specific indicator, all aspects of the indicator are listed. The standard indicators additionally have a link to a document that comprises detailed instructions for data collection and analysis.

The off-line version is easy to use in any context, also in the field. It consists of the indicator list in a matrix format (excel-table) as well as the data collection and analysis package for the standard indicators (pdf) that can both be downloaded from the website.

2 Toolbox

2.1 Risk staircase

There are many concepts to address DRR and CCA but one that proved useful is the risk staircase, which the Platform modified based on a version by the Swiss Agency for Development and Cooperation. The risk staircase serves as core element of the revised toolbox. It reflects the Swiss understanding of an integrated risk management and provides a clear sequencing of risk reduction measures.

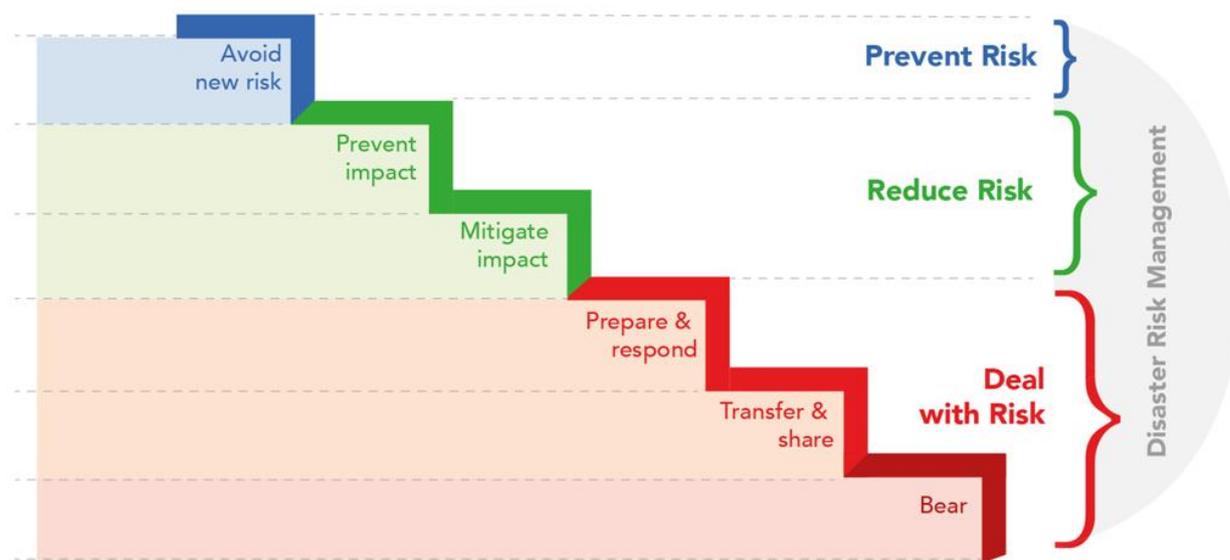


Figure 1: Risk staircase by the Swiss NGO DRR Platform.

Starting from the left, it is a typology of different DRR measures, which helps to do a basic risk screening relevant for all development projects. Each type of measure or step – from prevention to mitigation and on to preparedness for response and risk sharing – contributes to further reduce the risk (the area below the step) in order to reach an acceptable and manageable risk level.

In the future, climate change will further increase the frequency and intensity of climate-related hazards. In managing these risks, there is a significant convergence between the concepts and practices of DRR and CCA. Both conceptual frameworks share a common understanding of the components of risk and on how to reduce it: exposure needs to be minimised, vulnerability reduced, and capacities strengthened in ways that address disaster and climate change risk. CCA thus is covered in this toolbox by the sections prevention of new risks and mitigation of existing risks.

Moreover, the risk staircase allows linking the practical work of the NGOs on the ground with international policies, particularly with the SFDRR.

2.2 Structure

The toolbox is based on the log-frame logic. The underlying theory of change stresses a systematic approach with interlinkages between the output, outcome and impact level. Consequently, the toolbox encompasses impacts relating to resilience, outcomes covering measures of the risk staircase and related activities on the output level (see Figure 2). The focus of the toolbox

is on the outcome level, where changes in terms of physical protection as well as behaviour and knowledge are expected to happen.

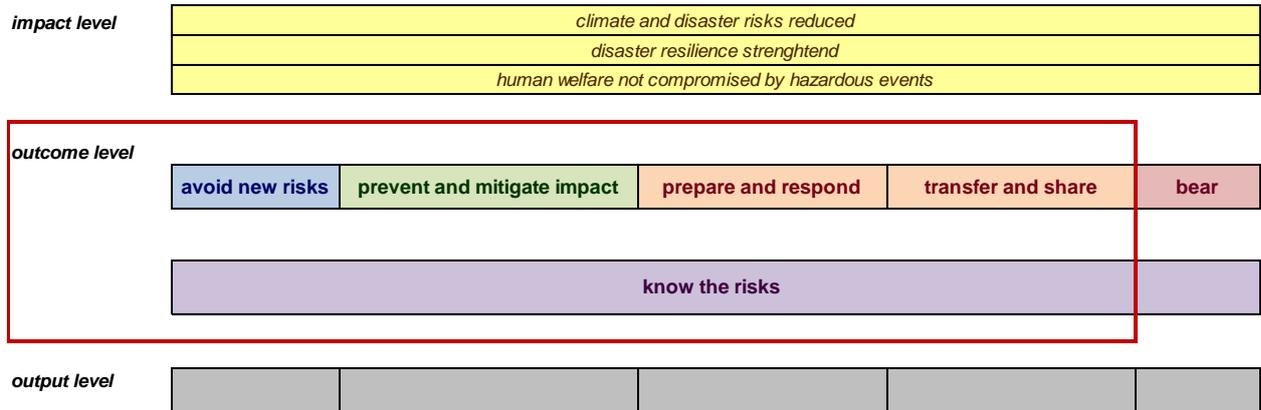


Figure 2: Structure and focus (red rectangle) of the toolbox.

The impacts in the toolbox are formulated in a generic way, they relate to the overall goals of strengthened resilience and reduced poverty. As the impact level is often out of reach of the interventions of stand-alone local level DRR NGO projects, no indicators were formulated. Respective indicators are contained in the SFDRR and SDG frameworks.

The toolbox does not contain outputs as they depend to a great extent on the type of project and context. Therefore, the users of the toolbox are encouraged to formulate their specific outputs and related indicators.

2.3 Generic outcomes

For all sections of the risk staircase as well as for the field risk knowledge, a set of outcomes and related indicators is proposed, which are suitable for the work of NGOs. For the bearing of risks, an outcome is formulated, but it was decided to refrain from adding indicators, because common experience is missing.

The outcomes are formulated in a generic and abstract manner followed by some characteristics that reflect the scope of the outcomes. They have to be contextualised within a specific programme or project. As well, the interlinkages between the steps of the risk staircase have to be established.

For a more actor-specific formulation of the outcomes see the overview of the outcomes along the risk staircase in the annex.

Avoid new risk



In many cases, risks grow and new risks arise more as a result of misuse of natural resources and expansion of settlements and infrastructure in hazard-prone areas than from a changing hazard situation. Therefore, measures in this field of intervention aim at risks not arising in the first place. ‘Avoid new risk’ means integrating a risk-sensitive perspective into any new investment and sector-specific measure and comprises public and private decision-making, regulations and practices for risk-sensitive territorial and financial/investment planning and action. Questions to clarify the need for action could be: How would a building react during an earthquake or a typhoon? What are the implications of the building of a road on the water flow in the area?

O1:
Decision-making is risk-sensitive

O2:
Hazard-prone areas are used risk-consciously

Two outcomes are formulated, outcome 1 focusing on risk governance, outcome 2 more directly on the reduction of the (physical) exposure to hazards.

Prevent and mitigate impact



The reduction of adverse impacts entails measures that completely avoid them as well as mitigation measures, which attempt to limit and reduce the adverse impacts on people, infrastructure and livelihoods. These two categories and interventions often overlap and are therefore covered jointly in this toolbox.

Technical/structural, organisational and management measures aim at reducing the adverse impacts of hazardous events by avoiding the hazard and reducing the exposure (e.g. prohibition of settlements in hazard-prone areas or proofing of buildings), reducing the vulnerability (e.g. sustainable resource management or agricultural practices) or reducing the hazard (e.g. reforestation, river embankments).

O3:
Human beings / settlements / (critical) infra-structures are safe

O4:
Livelihoods are protected

O5:
Agricultural production is climate-resilient

O6:
People/ households are economically flexible and not fully dependent from hazard susceptible activities

O7:
Natural resources are sustainably managed

Outcome 3 covers mitigation measures like engineering techniques as well as hazard-resistant construction. Due to these measures, settlements and inhabitants are less frequently and with less intensity affected by hazardous events.

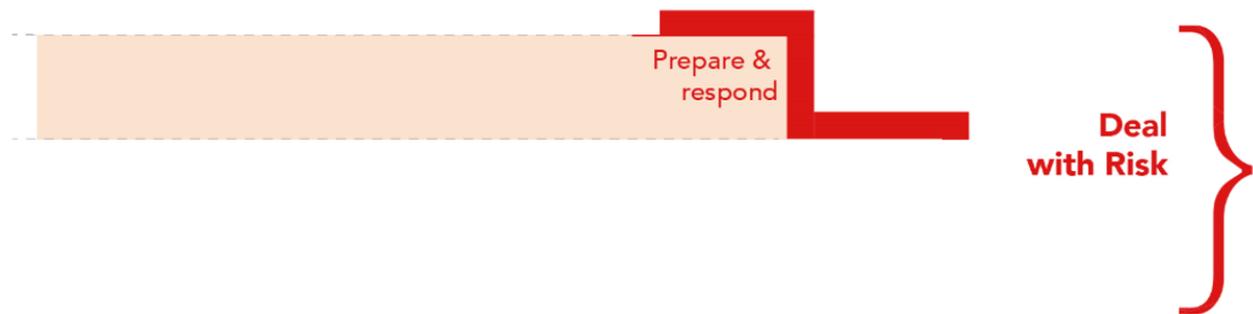
Outcome 4 covers the livelihoods: The term ‘livelihoods’ should be seen broadly, to include a range of assets and activities required for a means of living. Here it is contextualised in rural areas as this reflects many of the Platform organisations projects. In livelihood strategies, the assets

are used for consumption, production and exchange. If successful, the strategies will lead to a variety of improvements to the livelihoods, with greater income, better access to services, improved nutrition and food security, and at large reduced vulnerability to external trends, shocks and seasonality.

Outcome 5 and 6 are closely linked to the livelihoods strategies, they can be applied in specific project contexts.

Outcome 7 reflects the two ways well-managed natural resources contribute to DRR and CCA: On one side, they serve as natural protective barriers or buffers that reduce physical exposure to natural hazards. For example, healthy coastal ecosystems help to protect the coastline, well-maintained riverine ecosystems such as floodplains protect against floods, and robust forests reduce the risk of landslides and a better vegetation cover can increase drought resilience. On the other side, they have an important role in reducing social and economic vulnerability to hazards and climatic stresses by sustaining livelihoods and providing goods such as food, wood and fibre and other ecosystem services.

Prepare and respond



To be realistic, though, the scope for prevention and mitigation measures can be limited and it is therefore crucial to build capacities to deal with risk. While preparedness comprises the knowledge and capacities to effectively anticipate, respond to, and recover from the impacts of likely, imminent or current hazardous events, response is the actual action taken during or immediately after a hazardous event in order to limit the extent of losses.

Preparedness measures are most effective, when well-coordinated and combined. The successful implementation of measures such as early warning systems, contingency planning, stockpiling of equipment and supplies, the development of arrangements for coordination, evacuation and public information, and associated training and field exercises requires thoughtful planning a considerable time before an actual event strikes. Response actions include saving lives, reducing health impacts, ensuring public safety and meeting the basic subsistence needs of the people affected.

O8:
Mechanisms / strategies
are in place to cope
adequately with
hazardous events

O9:
Emergency response
is appropriate to
events

Outcome 8 covers preparedness aspects while outcome 9 focuses on response.

Transfer and share



Transfer and share is the process of shifting the financial or other impacts of particular hazardous events from one party to another or from individuals to collectives. Insurance is a well-known form of risk transfer. Another form of risk transfer comprises social protection schemes provided by the government as well as solidarity mechanisms at community level (e.g. emergency funds in-cash or in-kind) with reciprocal expectations of mutual aid that help people to share and bear impacts of a hazardous event.

O10:
Risk transfer or sharing mechanisms are functional and accessible

Bear the risk



A zero-risk society is not possible, so the objective of DRR is to keep the residual risk at a level that is acceptable; one which can be borne by the people, communities and societies given existing social, economic, political, cultural and environmental conditions.

O11:
The residual risk can be better borne

To support people in this respect, this would include interventions on psychosocial processes and mechanisms, which doesn't focus only on hazard and climate risks. As these issues are not in the scope of DRR, specific indicators weren't formulated.

Know the risk

The knowledge of the risk situation, including access to and use of relevant data, as well as the capacities of different actors are fundamental for any action to prevent and reduce risks. Therefore, risk knowledge is understood as transversal issue for all sections of the risk staircase.

(Climate) risk assessments comprise the evaluation of the risks and the corresponding hazards, vulnerabilities and coping capacities and provide a basis for decision-making. Integrating a climate-lens into the assessment refers to inclusion of a longer time period (at least one generation) and the evaluation of existing climate-related data, projections and stakeholders.

Capacity on the other hand is the combination of all the strengths, attributes and resources available within a community, society or organisation to manage and reduce the risks and strengthen resilience.

O12:
Capacities of decision makers, authorities, communities, households, XXX are strengthened allowing them to adequately take action to reduce risks/adapt to climate change

2.4 Indicators

For each outcome a set of indicators – ranging from 3 to 10 – is proposed. The indicators are arranged according to the characteristics of the respective outcome. For instance, for outcome 1:

Outcome	Characteristics	Indicator
Decision making is hazard and climate risk-sensitive	State of institutional structures and processes at local level	%...
		%...
	Degree of participation of civil society in decision making processes	%...
		%...
	Level of accountability of private decision making	%...
		%...
	Degree of advocacy/influence on private decision making by the authorities	%...

The indicators are complemented by a description, references to numerator / denominator, target values, means of verification and additional remarks (to provide or refer to further information). They are formulated in a short and simple way.

The description specifies where needed some of the aspects of the indicator. An example:

Indicator	Description
% of communities / households with appropriate and tested contingency plans that are coordinated with higher-level plans	Contingency plans have to include: scenario planning, intervention strategy, standard operational procedures. Appropriate: covering all relevant risks, based on hazard and risk assessments. Tested: minimum 1/year. Coordinated: linked through defined functions and people assuming the functions.

The indicators are generic and have to be adapted, expanded or specified according to the project focus and country context in order to become SMART (Specific, Measurable, Achievable, Relevant, Time-bound).

2.5 Standard indicators

For each outcome, at least one standard indicator is proposed, in total 12:

Risk staircase	Standard Indicator
Avoid new risks	% of public budget invested in DRR/CCA
Prevent and mitigate impact	% of structural protective measures maintained properly by the community
	% of critical infrastructure remains functional during and after an event
	% of households using measures to protect productive assets
	% of households growing crops that are resilient to climate hazards [stresses]
	% of households engaged in multiple occupations/with diversified income portfolio
Prepare and respond	% of households adopting sustainable environmental management practices
	% of communities in hazard-prone areas with a functional emergency committee
Transfer and share	% of households living in a hazard-prone area that correctly react to an alert
	% of the communities where social protection schemes are established and accessible
Know the risks	% of households and/or persons able to correctly name local hazard risks and measures to reduce them
	% of households that are able to describe sustainable environmental management practices

For the standard indicators, additional guidance for the collection and analysis of data is provided, including questionnaires and calculation instructions to measure the indicator. The instructions leave space for minor adaptation that might be required to respond to the specific context of a project, but are detailed enough to enable the exchange and learning on outcome measuring between the Platform member organisations. It is therefore highly advised to use i) the respective standard indicators and ii) use them as instructed.

Where existing, additional data collection and analysis tools used by Platform member organisations are provided which can be used as templates or for reference.

3 Credits and Literature

3.1 Credits

The Swiss NGO DRR Platform decided to review the indicator toolbox considering the global developments and increased experience of member organisations while at the same time integrating CCA aspects and elements, in order for the member organisations to have access to a set of indicators for targeted DRR and CCA projects. The Platform mandated a working group comprising of Swiss Red Cross (lead organisation) and Caritas Switzerland to conduct this process and commissioned Franziska Schmid (RisikoWissen), external consultant, to elaborate the DRR and CCA indicator toolbox.

In sequenced workshops in 2018 and 2019, the participating member organisations agreed on using the risk staircase as structuring element, agreed for each step of the risk staircase to contain at least one outcome, discussed and validated the outcomes and indicators and established standard indicators for which a detailed measuring and analysing instruction was worked out and which might be used in the future for collective learning and benchmarking. The toolbox was finalised in bilateral discussions within the working group and with a last feedback round inviting all the Platform member organisations.

3.2 Literature

The report bases on:

- Swiss NGO DRR Platform: DRR Indicator Toolbox (version 1), 2015
- Swiss NGO DRR Platform: Disaster Risk Reduction, Climate Change Adaptation and Resilience. Briefing Note, October 2016.
- Harari, N., Gavilano, A. and Liniger, HP. 2017: Where people and their land are safer: A Compendium of Good Practices in Disaster Risk Reduction. Bern and Lucerne, Switzerland: Centre for Development and Environment (CDE), University of Bern, and Swiss NGO Disaster Risk Reduction (DRR) Platform, with Bern Open Publishing
- Twigg, John, 2015: Good Practice Review 9. Disaster risk reduction.

For the formulation of outcomes and indicators:

From the Platform organisations:

- SRC, CBDRM Indicators and Impact Model (Table)
- Caritas, DRR and CCA Standard Indicators
- HEKS/EPER-International-Division's Global Result Frameworks and key indicators

Additional resources:

- Acclimatise, CDKN, 2017: Green Climate Fund Proposal Toolkit 2017: Toolkit to develop a project proposal for the GCF
- Care: Framework of Milestones and Indicators for Community-Based Adaptation
- GIZ: Repository of Adaptation Indicators Real case examples from national Monitoring and Evaluation Systems
- Indikit: <https://www.indikit.net/indicator/29-drr-and-resilience/144-shelter-protection>
- Sendai Framework Monitor: <https://www.preventionweb.net/sendai-framework/sendai-framework-monitor//> or <https://sendaimonitor.unisdr.org/>
- Sustainable Development Goals: <https://sustainabledevelopment.un.org/>
- Twigg, John, 2009: Characteristics of a Disaster-resilient Community. A Guidance Note.

Annex: Overview of the outcomes along the risk staircase

<i>climate and disaster risks reduced</i>
<i>disaster resilience strenghtend</i>
<i>human welfare not compromised by hazardous events</i>

avoid new risks		prevent and mitigate impact					prepare and respond		transfer and share	bear
O1: Decision making is hazard and climate risk-sensitive	O2: Hazard-prone areas are used risk-consciously	O3: Human beings/ settlements, (critical) infrastructures are safe	O4: Livelihoods are protected	O5: Agricultural production is climate-resilient	O6: People/ households are economically flexible and not fully dependent from hazard and climate susceptible activities	O7: Natural resources are sustainably managed	O8: Mechanisms/ strategies are in place to cope adequately with hazardous events	O9: Emergency response is appropriate to events	O10: Risk transfer or sharing mechanisms are functional and accessible	O11: The residual risk can be better borne
<i>Authorities/communities/ houtholds/ private companies take risk-sensitive decision</i>	<i>Authorities/communities/ houtholds/ private companies use hazard-prone areas risk-consciously</i>	<i>Authorities/communities/ houtholds/ private companies manage to keep human beings, settlements and (critical) infrastructures safe</i>	<i>People/ houtholds are abel to protect their livelihoods</i>	<i>Households/ farmers have adopted climate-resilient agricultural practices</i>	<i>People/households have made themselves economically flexible and independent from hazard susceptible activities</i>	<i>People/ houtholds have adopted sustainable resource management practices</i>	<i>Communities/ households/ organisations/ authorities dispose of mechanisms/ strategies to cope adequately with hazards</i>	<i>Communities/ houtholds/XXX respond appropriately to events</i>	<i>Communities/ households have access to functional transfer and sharing mechanisms</i>	<i>Individuals can better bear the residual risk</i>
<p>O12: Capacities of decision makers, authorities, communities, households, XXX are strengthened allowing them to adequately take action to reduce risks/adapt to climate change</p>										